

Notice of Allowability

Application No.

10/709,374

Examiner

Lucy P. Chien

Applicant(s)

CHANG, TING-JUI

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 04/30/2004.
2. ☒ The allowed claim(s) is/are 1,2,3, 6 and 7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Title: OCB liquid crystal display with specific refractive indices and inequality relations.

Authorization for this examiner's amendment was given in an interview with Belinda Lee on 3/14/2007 to cancel non-elected claims: 4,5,8,9,12-14.

Election/Restrictions

Claim 1,6,7 are allowable. The restriction requirement of Species I-V, as set forth in the Office action mailed on 9/21/2005, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claim 2,3, are directed to Species I are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim. However, claim 4,5,8,9,12-14, directed are withdrawn from consideration because they do not all require all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is

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anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The following is an examiner's statement of reasons for allowance:

Regarding Claim 1,

Miyachi et al (US 20010048497) discloses (Figure 10) a back light unit (shown in Figure 3); an optical compensation circular polarizer unit (which consists of polarization film (12a) and a quarter wave plate (3a)) disposed over the back light unit; optically self-compensated birefringence liquid crystal panel (consists of liquid crystal cell (11) and the liquid crystal compensation plate (14a,14b) disposed over the optical compensation circular polarizer unit (12a,13a); and an optical compensation circular analyzer unit (12b,13b) disposed set over the optically self-compensated birefringence liquid crystal panel, and the optical compensation circular analyzer unit set comprising: an analyzer plate (12b), wherein the absorption axis (Aab) of the analyzer plate (12b) is perpendicular to the absorption axis (Aaa) of the polarizer plate (12a), and the polarizer plate (12a) form an included angle of between 40- 50° with the alignment direction of the liquid crystal panel (Page 13 [0159]); a second uniaxial quarter-wave plate (13b) sandwiched between the analyzer plate (12b) and the

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optically self-compensated birefringence liquid crystal panel (14b,11), wherein the optical axis of the second uniaxial quarter-waveplate forms an included angle of about 45° with the absorption axis of the analyzer plate (Page4 [0068]); and a second biaxial compensation film (Page 15, [0173]) sandwiched between the second uniaxial quarter-wave plate (13b) and the optically self-compensated birefringence liquid crystal panel wherein the second biaxial compensation film has principal refractive indices n_x' , n_y' , and n_z' that satisfy the following inequality relations: $n_x' > n_y' > n_z'$ (Figure 39). Miyachi et al discloses the following inequality $(n_x' - n_z') / (n_x' - n_y') > 6$ calculated by using the variables given ($n_x - n_y = 40$, $n_x + n_y / 2 - n_x = 230$).

Miyachi et al does not disclose the following inequality relations: $4 > (n_x' - n_z') / (n_x' - n_y') > 2$, and the principal axis with the refractive index n_x' is perpendicular to the alignment direction of the liquid crystal panel.

Sasaki et al discloses each of the quarter-wave plate and the half-wave plate (biaxial) to satisfy a relation $N_z = (n_x' - n_z') / (n_x' - n_y') > 1.05$. But does not disclose using these plates in a OCB device.

There would be no reasons to combine these references to disclose the second biaxial compensation film has principal refractive indices n_x' , n_y' , and n_z' that satisfy the following inequality relations: $n_x' > n_y' > n_z'$ and having the following inequality relations: $4 > (n_x' - n_z') / (n_x' - n_y') > 2$, and the principal axis with the refractive index n_x' is perpendicular to the alignment direction of the liquid crystal panel.

Claim 2,3,6 and 7 are dependent of Claim 1 therefore are allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

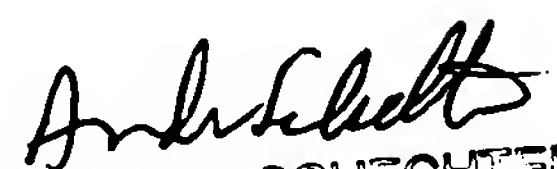
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien
Examiner
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ANDREW SCHECHTER
PRIMARY EXAMINER